

01. PRODUCT INFORMATION AND SALES AIDS AREA

01.03 DID YOU KNOW...

Emissions control systems

Homologation for exhausts and catalytic converters



EMISSIONS CONTROL HOMOLOGATION FOR EXHAUSTS AND CATALYTIC CONVERTERS



Homologation for exhausts and catalytic converters

Did you know that...

- The most important feature a silencer must meet today to be installed with full guarantee in a vehicle, is for it to be homologated (approved) for the vehicle. Homologation guarantees that the silencer has passed a series of comparative tests with the original equipment, carried out by specialists in the government's technical homologation centres. The achievement of homologation, guarantees that the silencer meets the noise and back-pressure specifications designed by the make engineers for this particular vehicle, and along with the original equipment is the best option as regards this vehicle's performance and consumption.



Homologation for exhausts and catalytic converters

Did you know that...

- Walker® is one of the few manufacturers on the market that has its whole range of exhaust pipes and catalytic converters completely homologated, thus offering maximum guarantees of performance, low consumption and protection of the engine to all users of its products.



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Homologation for exhausts and catalytic converters

Did you know that...

- Technical inspection centres in each country deal with ensuring that the vehicles in circulation meet the gas regulations established by the different governmental organisations. The people in the inspection centres (and the vehicle owner too) are entitled to ask for the corresponding homologation documentation for a silencer or catalytic converter if they require.

Kraftfahrt-Bundesamt
20000 Potsdam

E1 Bescheinigung über die Erweiterung der Genehmigung (für einen Austauschbauteil nach der Regelung Nr. 11)

Consentimento concerno la estensione dell'approvazione (di un ricambio catalitico convertito secondo la Regolaione N. 11)

Nummer der Genehmigung: 00088 Erweiterung: 01
Approval No. Extension No.

- Name und Anschrift des Antragstellers - Applicant's name and address:
Fussler Automotive Deutschland GmbH
D-71634 Bielefeld
- Name und Anschrift des Herstellers - Manufacturer's name and address:
Fussler Automotive Deutschland GmbH
D-71634 Bielefeld
- Fahrer- oder Herstellermarke des Herstellers - Manufacturer's trade name or mark:
WALZER oder - ex QUADRO oder - ex FOMI oder - ex KUTLER
- Wahrscheinliche Bezeichnung des Austauschbauteils - Probable designation of the replacement catalytic converter:
K4 187
- Fahrergruppen - Zu den (den) (den) Austauschbauteil(en) geordnet ist - Vehicle type(s) for which the catalytic converter type applies as replacement catalytic converter:
siehe Anlage 2 des Testberichts
see enclosure 2 of test report
- Fahrergruppen (en), bei dem (den) dem Austauschbauteil geprüf(t) worden ist - Type(s) of vehicle(s) on which the replacement catalytic converter has been tested:
siehe Anlage 2 des Testberichts
see enclosure 2 of test report
- Zur Genehmigung vorgeföhrt von - Submitted for approval on:
siehe Anlage 2 des Testberichts
see enclosure 2 of test report
- Technischer Dienst, der die Prüfungen für die Genehmigung durchföhrt - Technical service responsible for approval tests:
VDA Automotive GmbH
Unternehmensgruppe VDA Mittelstandszentrum
D-87169 Osnabrück

8.1. Datum des Gutachtens - Date of test report:
13.09.1999

Kraftfahrt-Bundesamt
20000 Potsdam

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Nummer der Genehmigung: 00088 Erweiterung: 01
Approval No. Extension No.

8.2. Nummer des Gutachtens - Number of test report:
143-0278-98-793A

9. Die Genehmigung wird erweitert
Approval extended

10. Ort - Place:
D-24932 Flensburg

11. Datum - Date:
16.09.1999

12. Unterschrift: im Auftrag
Signature:
[Signature]
Kloppmann

13. Ein Verzeichnis der Unterlagen, die bei der Genehmigungsbehörde hinterlegt und auf Anforderung erhältlich sind, ist dieser Mitteilung beigelegt.
Annexed to this communication is a list of documents in the approval file deposited at the administrative services having delivered the approval and which can be obtained upon request.

1 Blatt Nebenbestimmungen und Rechtsbehelfsbelehrung
(page of by-conditions and information to legal remedy)

1 Gutachten (3 Blatt) mit Anlagen
test report (3 sheet/s) with enclosure

Anlage 2 von Gutachten *
enclosure 2 of test report *

Beschreibung der Änderungen *
description of modifications *
see page 1 of test report

Die mit * gekennzeichneten Anlagen sind der Bescheinigung beigelegt.
If enclosures are marked by *, they are annexed to this communication.

Homologation for exhausts and catalytic converters

Did you know that...

- Since the appearance of environmental regulations in the early 1990s, the installation of unapproved silencers or catalytic converters has been forbidden in most industrialised countries of the world, including practically all countries of the European Economic Community.
- The law prohibits the installation of non homologated silencers or catalytic converters in vehicles, though not their sale. This is why many exhaust system manufacturers continue to sell unapproved units to installers, for if the technical checking centres should strictly apply the law, they would be exempt of responsibility and the installers would be responsible before the law for fitting products considered illegal in current legislation.



Homologation for exhausts and catalytic converters

Did you know that...

- The fact that an exhaust pipe is homologated implies that the design has been carried out by copying the design of the original equipment in terms of noise and back-pressure.
- They are therefore always the best option in terms of vehicle consumption and performance.
- The tests that an exhaust pipe has to pass to be approved are static noise, dynamic noise, back-pressure and adaptability. To obtain the approval certificate, all tests must be successfully passed. Any failure to immediately pass any of the tests will incur refusal of the homologation.



Homologation for exhausts and catalytic converters

Did you know that...

- There are two noise tests among the homologation tests that the exhaust pipe or catalytic converter has to pass. One static (performed in a soundproof chamber) and one dynamic (on a special circuit). Both tests are carried out with the part for approval and the result is conveyed with the result of the test of the original equipment. To pass these tests, the noise emitted by the silencer or catalytic converter at a certain number of revolutions may never exceed 72dB and must always be equal to or under the noise emitted by the silencer or catalytic converter of the original equipment. This means that practically all exhaust pipes sold as "Sport" or "tuning" currently made (apart from some that do not make noise) are non homologated, because these devices noise is higher than the original equipment and this test cannot be passed under the circumstances.



Homologation for exhausts and catalytic converters

Did you know that...

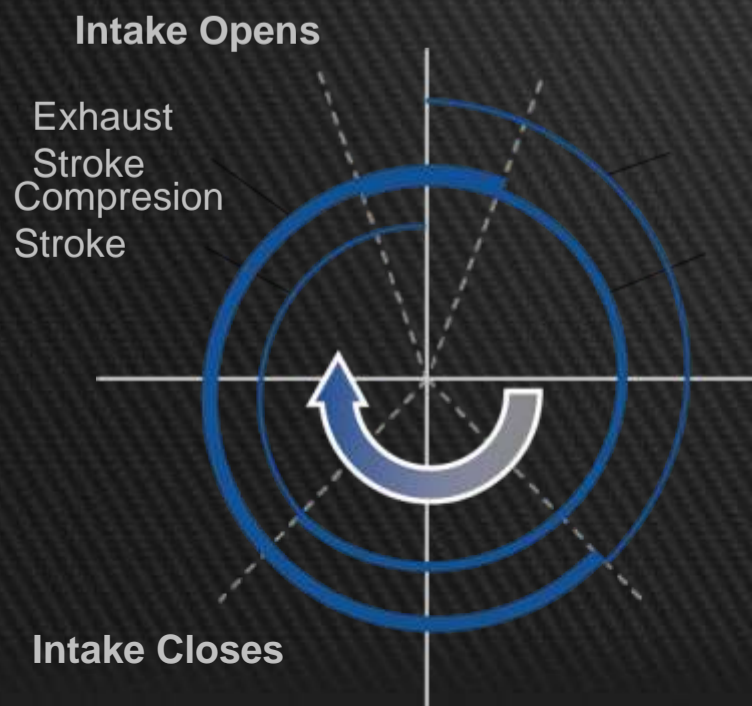
- Unapproved exhaust pipes or catalytic converters are made without bearing in mind the internal back-pressure of the system, so their use in catalysed emission control systems is not recommended, given that they end up damaging the pollution systems (melting catalytic converters internal monolith, shorten the lifespan of oxygen sensors, etc.) causing serious and expensive damage for the end users.



Homologation for exhausts and catalytic converters

Did you know that...

- In four stroke engines “the valve overlap” (or process that takes place at the end of exhaust stroke, when the intake valve opens a few degrees before the exhaust valve closes to clean the burnt gases from the engine combustion chamber and start the intake stroke with the right air/fuel mixture) defines exhaust system back-pressure.
- When the back-pressure is wrong, small amounts of unburnt fuel leave the combustion chamber together with oxygen with the exhaust gases, as the chambers do not clean in the right sequence of time for this to be done correctly). The fuel that escapes through the exhaust system does not only decrease the power and increase consumption, but also, by coming into contact with the surface of the catalytic converter monolith, that in normal driving conditions could be around 500°C, ignites (fuel auto-ignites at 450°C) and burns at 1850°C, a more than sufficient temperature to gradually melt the surface of the catalytic converter (that melts at 1.400°C in case of ceramic monolith and 1.600°C in case of metallic monolith) destroying the unit at a high cost to the user.



Homologation for exhausts and catalytic converters

Did you know that...

- Apart from the fact that the installation of non homologated exhaust systems is an illegal activity, in most cases the savings achieved in buying these exhaust systems in comparison with those approved for the vehicle are a few euros, given that the problems caused by their use (loss of power, increase of consumption, catalytic converter breakage, damaged oxygen sensors, premature corrosion of the exhaust system, micro fusion of the exhaust valves due to excessive back-pressure, silencer explosion due to fuel condensation inside when cold, etc.) are exponentially larger and more expensive than any saving that might be achieved (several hundred euros in most cases).

